



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,330	10/16/2001	Graham K. Philp JR.	7047	1668

7590

10/23/2003

SHLESINGER, ARKWRIGHT & GARVEY LLP
3000 South Eads Street
Arlington, VA 22202

EXAMINER

POE, MICHAEL I

ART UNIT	PAPER NUMBER
----------	--------------

1732

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,330

Applicant(s)

PHILP, GRAHAM K.

Examiner

Michael I Poe

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to a method of making a new dental prosthetic from an existing dental prosthetic, classified in class 264, subclass 17.
 - II. Claims 12-21, drawn to a mold for making a dental prosthetic, classified in class 249, subclass 54.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another and materially different process such as a process wherein the existing denture is placed in the mold prior to filling the bottom half of the mold with a first molding material and the filling of the bottom half of the mold causes the first molding material to flow around the existing denture.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with applicant's attorney Terrance Brown on October 1, 2003, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant application, the abstract exceeds 150 words and should be amended to more concisely describe the disclosure.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 includes the recitation "providing the second material includes adding the second material through the partially open bottom face of the top half". This recitation is confusing because it would be impossible based on the steps of claim 1. Claim 1 recites "the top half including ... a partially open bottom face for mating with the open top face of the bottom half of the mold" and the step of "placing the top half of the mold on the bottom half of the mold" prior to the step of "providing a second material". If the bottom face of the top half of the mold is mated with the open top face of the bottom half of the mold prior to providing a second material as set forth in claim 1, it would be impossible to add the second material through the partially open bottom face of the top half as claimed in claim 2. Further, the

Art Unit: 1732

applicant's original disclosure seems to indicate that the second material is added through the partially open top of the top half rather than partially open bottom face of the top half. For the purpose of this Office action, based on the applicant's original disclosure, the examiner has assumed that claim 2 comprises adding the second material through the partially open **top** of the top half of the mold.

Claim Rejections - 35 USC § 103

7. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis).

Claims 1-3, 5, 6 and 10

Palazzolo #1 teaches a method for the production of a duplicate of a denture original including placing the original denture 18 (an existing dental prosthetic) in a bottom mold 1, pouring a material for use in dental molds (a first molding material) into the bottom mold 1 (bottom half, including a side wall, a bottom and an open top face for mating with the top half) until reaching the level of the bottom of the teeth part 20 of the original denture 18 and thereby embedding the gum portion 19 (a first portion of the existing denture) in the mold material, fastening a top countermold 2 (top half including a further side wall, a partially open bottom face for mating with the open top face of the bottom half, and a partially open top) onto the bottom mold 1, pouring (adding) a second material for use in dental molds (a second molding material) into the assembled mold through a central opening 8 (through the partially open top of the top half) in the base of the top countermold 2 to completely embed (covering) the tooth part 20 (a further portion of the existing denture) of the original denture 18, placing the assembled mold into a press of the type used in odontotechny to obtain perfect adherence between the original denture 18 and the mold materials with any excess mold materials being forced out through the central openings 7 and 8 in the assembled mold, allowing the mold materials to harden and/or polymerize in the assembled mold (allowing the first and second material to harden) to form a plaster imprint 23 of the gum portion 19 and a polymer imprint 24 of the dental arch 20 (using the hardened first and second materials to form a negative of the existing dental prosthetic), extracting the original denture 18 from the assembled mold and returning the original denture 18 to the user (removing the dental prosthetic from the first and second material), and forming a new denture in the mold formed between imprint 23 and imprint 24 (using the

Art Unit: 1732

negative of the existing dental prosthetic to make a positive of a new dental prosthetic) (Abstract; column 5, line 33 – column 6, line 45).

With regard to claim 1, Palazzolo #1 does not specifically teach that the gum portion 19 is placed in the bottom mold 1 after the bottom mold 1 has been partially filled with the mold material. However, Huestis teaches a method of initiating the construction of a new denture from a worn denture including placing a worn denture in an impressionable material 12 located in a flask 14 comprising an upper shell 15 and a lower shell 16 (partially filling the bottom half of the mold with a first molding material; placing a first portion of the existing denture in the first molding material disposed in the bottom half), closing the flask 14, allowing the impressionable material 12 to set and solidify fully in the flask 14, separating the upper shell 15 from the lower shell 16, and removing the patient's worn denture for return to the patient (Abstract; column 3, line 50 – column 4, line 4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to place the first molding material in the bottom mold 1 prior to inserting the original denture 18 into the bottom mold 1 in the process of Palazzolo #1 as taught by Huestis to assure that the first mold material was completely filled into the spaces surrounding the gum portion 19 of the original denture 18 to thereby prevent voids in the formed molding impression.

With regard to claim 1, Palazzolo #1 does not specifically teach that the bottom of the bottom mold 1 is completely closed. However, as illustrated in Figure 5, Huestis further teaches that the lower shell 16 has a completely closed bottom. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use a bottom mold 1 having a completely closed bottom in the process of Palazzolo #1 as taught by Huestis to remove the limitation of the bottom mold 1 needing to be placed on a flat surface as the first molding material is introduced into the bottom mold 1 to thereby make the process of Palazzolo #1 more flexible.

With regard to claim 3, Palazzolo #1 does not specifically teach that the material poured into the bottom mold is alginate. However, Huestis further teaches that the impressionable material 12 (the first material) is an irreversible hydrocolloid and most preferably an alginate. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use alginate as the first molding material instead of plaster in the process

Art Unit: 1732

of Palazzolo #1 as taught by Huestis to provide a first molding material that was cleaner to employ, that generates significantly less dust, and that is cheap.

With regard to claims 5 and 6, Palazzolo #1 in view of Huestis teaches embedding a first portion of the denture (i.e., tooth part 20) in a first molding material followed by covering a second portion of the denture (i.e., gum portion 19) with a second molding material. However, this orientation of the denture is opposite of the orientation claimed in claims 5 and 6. Since the orientation of Palazzolo #1 in view of Huestis would produce the same inner mold impressions as the claimed orientation, and therefore the same product would be produced using those inner mold impressions, the examiner stipulates that the orientation of the denture in the process of Palazzolo #1 in view of Huestis would be an obvious variation of the claimed orientation and that the orientation of the denture is not patentably significant in the instant case. As such, the examiner stipulates the applicant's invention in this regard is not patentably distinct from the process of Palazzolo #1 in view of Huestis in this regard.

Claims 7-9

The discussion of Palazzolo #1 and Huestis as applied to claim 1 above applies herein.

Palazzolo #1 further teaches that the top countermold 2 is fastened onto the bottom mold 1 by bolts 14 that pass through bores 12 in the top countermold 2 and that screw into a thread in a bore 11 in the bottom mold 1 (a locking device is provided for attaching the top half of the mold to the bottom half; a locking device detachably attaches the top half to the bottom half; the locking device permanently attaches the top half to the bottom half) (column 5, lines 6-22).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) and U.S. Patent No. 4,094,067 (Hazar).

Claim 4

The discussion of Palazzolo #1 and Huestis as applied to claim 1 above applies herein.

Palazzolo #1 in view of Huestis does not specifically teach that the second molding material may be dental stone. However, Hazar teaches a method for producing artificial dentures including casting an impression model 100 around the lower areas of a fitted denture module, placing the denture module with the impression model 100 in a flask 102, pouring plaster 104 (a first molding material) in the flask 102

Art Unit: 1732

around the impression model 100, allowing the plaster 104 to set, applying a release agent to the hardened plaster 104, pouring plaster or dental stone 108 (a second molding material; the second material includes a dental stone) into the flask 102 over the denture (covering a portion of the first material and a further portion of the existing denture with the second material), and allowing the stone 108 to harden to form a mold for an artificial denture (column 4, line 56 – column 5, line 15). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use dental stone as the second molding material in the process of Palazzolo #1 in view of Huestis as taught by Hazar to provide a second material that was stronger than plaster to thereby produce a stronger impression mold.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) and U.S. Patent No. 4,521,193 (Cialone).

Claim 11

The discussion of Palazzolo #1 and Huestis as applied to claim 10 above applies herein.

Palazzolo #1 in view of Huestis does not specifically teach that corrections to the existing dental prosthetic are made prior to the making of the negative. However, Cialone teaches a method for constructing a temporary denture from an original denture wherein a missing or damaged part of an original denture is replaced before an impression is made or wherein an appropriate correction in the impression is made before molding the temporary denture from the original denture (making corrections to the existing dental prosthetic prior to making the negative) (column 4, lines 31-42). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to make any necessary corrections to the original denture 18 prior to forming the impressions in the process of Palazzolo #1 in view of Huestis as taught by Cialone to provide a denture that more accurately fits the patient's mouth to thereby reduce post molding adjustments.

Art Unit: 1732

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 2,233,295 (Miller), U.S. Patent No. 2,328,285 (MacDougall), U.S. Patent No. 5,324,186 (Bakanowski), U.S. Patent No. 6,003,720 (Morimoto et al.), U.S. Patent No. 6,224,375 B1 (Diasti et al.) and U.S. Patent Application Publication No. US 2002/0163096 A1 (Price) have been cited of interest to show the state of the art at the time the invention was made.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael I Poe whose telephone number is (703) 306-9170. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (703) 305-5493. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.



Michael Poe/mip



**MICHAEL COLAIANNI
PRIMARY EXAMINER**